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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,704	01/05/2001	Lee D. Bergerson	TRW(VSSIM)4696	5186

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EXAMINER

CULBRETH, ERIC D

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 12/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,704

Applicant(s)

BERGERSON ET AL.

Examiner

Eric D Culbreth

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 6, 8-10, 12-14, 17, 20, 22-26 and 31-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 11, 15, 16, 18, 19, 21 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 & 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 6, 8-10, 12-14, 17, 20, 22-26, and 31-39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892 or initialed on a form PTO-1449, they have not been considered.

This refers to the references and publications on pages 7 and 28-29.

3. The reference marked through on the form PTO-1449 filed 1/5/01 was not considered because a copy of that reference was not found in the file. To ensure consideration, applicant should include a copy of that reference with the next correspondence.

Specification

4. The abstract of the disclosure is objected to because legal phraseology ("comprises", "comprise") should not be used. Correction is required. See MPEP § 608.01(b).

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5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. On page 16, line 3 "62-66" was changed to "62, 64, 66" by informal examiner's amendment (there are no numerals 63, 65 in the disclosure).

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claim 1 of the instant case is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/818,127. Although the conflicting claims are not identical, they are not patentably distinct from each other because every feature of claim 1 of this application can be found in claim 1 of 09/818,127.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 15-16 of the instant application are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10 and 12 of copending Application No. 09/756,⁴509. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference between claim 15 of this application and claim 10 of the ⁴509 application is the preamble, which carries in itself no patentable weight. Claims 16 of this application and 12 of the ⁴509 application are the same except for the preambles.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 27-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 27, line 5 the alternative phrase "or" is indefinite, failing to positively define structure.

In claim 28, "CMOS" is not understood (what does this encompass?).

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Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Thorn (U.S. Patent 4,928,991).

Thorn discloses occupant protection device 44 and a microelectromechanical system device (MEMS) 10 energizable to cause actuation of the protection device (note cartridges 12 which would be mechanical and printed circuit board 24, which would include microelectronics). The MEMS device is an energizable fluid source emitting a primary fluid into housing 16 guided to airbag 44 as broadly recited (claims 1-3) (i.e., primary in that it is necessary for inflation of the bag), and Thorn shows solid material in the cartridges 12 in Figure 4, and teaches solid propellant (pyrotechnics) at column 1, lines 35-40 (claim 7).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claims 4-5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thorn in view of Faigle et al (U.S. Patent 5,460,405).

Thorn teaches a plurality of MEMS devices 12 as broadly recited and housing 16 directing primary fluid into the air bag but does not teach individually actuatable MEMS devices, although he does teach programming the multiple generators to adapt to various conditions of the crash at column 2, lines 5-10. Faigle et al teaches in the last 4 lines of the Abstract setting off one or a plurality of sources of inflation fluid in response to collision and position signals. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Thorn to include individually actuatable MEMS devices as taught by Faigle et al in order to achieve Thorn's goal of adapting activation of the multiple gas generators to conditions (claim 4). In the combination Faigle et al teaches sequentially activating the desired number of fluid sources (column 4, line 65 – column 5, line 3) (claims 5 and 11).

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17. Claims 15-16, 18-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faigle et al in view of Kurokawa et al (U.S. Patent 3,724,870, cited by applicant) and Rink et al (U.S. Patent 5,692,776).

Faigle et al disclose individual actuatable fluid sources 22, 24, 26, but does not disclose the specific structure of the fluid sources. Kurokawa et al discloses a gas producing device with outer layers 6 that dislodge by gas pressure produced by the middle layer's combustion products (i.e. heated pressurized gas) at column 3, line 60 – column 4, line 4. Rink et al teaches rupture disc 46. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Faigle et al to include a gas generating device such as taught by Kurokawa et al in order to use a standard known structure of gas generating device and to include a rupturing segment or disc on each device as taught by Rink et al in order to conventionally seal the explosive material using alternative equivalent well known structure in the art (claim 15). Faigle et al teaches grains 30 of ignitable material (pyrotechnic material) which would produce a pressurized gas for an airbag (claims 16 and 19), and Kurokawa et al's wire 30 is a micro-resistor which would be in each gas generating device as broadly recited in claim 18. Regarding claim 21, the multi-layered device in the combination would produce a primary fluid for the protection device (i.e., a fluid that inflates it).

18. Claims 27-30 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Graves et al (U.S. Patent 5,404,263) in view of Faigle et al.

Graves et al discloses (Figures 6-12g) an array of devices (Figure 5) producing inflation fluid for filling an air bag, the devices being activated by electric heating elements 40, 44 in the

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base 70, 102 (Figures 12f and 12g). Faigle discloses individually energizable devices 22, 24, 26 and controller 50 conducting current into selected ones of the sources. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

Graves et al to include a controller activating individual devices as taught by Faigle et al in order to adjust for temperature and position (Faigle et al, Abstract and Figure 1) (claim 27). Regarding claims 28-30, Graves et al teaches bridgewire 52 heating (i.e., it is a micro-resistor as broadly recited) to ignite a propellant or pyrotechnic (column 5, lines 15-27) ; the process of making the heating elements is not a patentably distinguishing limitation in an article claim (MPEP 2113). The inflation fluid will be under pressure in the air bag.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gioutsos et al (U.S. Patent 5,400,487) and Galvin et al (U.S. Patent 6,149,190 are cited to show multiple inflators and micromechanical systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric D Culbreth whose telephone number is 703/308-0360. The examiner can normally be reached on Monday-Thursday, 9:30-7:00 alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703/746-3508 for regular communications and 703/308-2571 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Eric D Culbreth
Primary Examiner
Art Unit 3616



12/21/02

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December 21, 2002